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Artisanal mining and the rationalization of informality: Critical reflections from Liberia

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Abstract

Across sub-Saharan Africa, artisanal and small-scale mining (ASM) – low-tech, labour intensive mineral extraction and processing – now represents a major source of direct and indirect employment for millions of poor people. However, while the livelihood benefits of ASM have been widely documented, most artisanal miners continue to operate in the informal sphere, despite growing interests from governments, donors and policy makers in the formalization of the sector. A substantial literature has emerged around the need for states to formalize artisanal mining, with promises of increased productivity for miners and a corresponding increase in tax revenues for governments. A number of overarching mineral resource policy frameworks, such as the Africa Mining Vision (AMV), have embraced this position, stressing the need for ASM formalization to serve as a platform for poverty reduction and rural development. Focusing on the case of Liberia, this article draws on recent multi-sited qualitative fieldwork carried out in the northwest region of the country, and critically reflects upon the question of why efforts to rollout formalization continue to fail. In doing so, the paper explores the position that the protection of the ongoing informality of artisanal mining is a rational strategy, at least from the perspective of those who profit from it. Addressing the persistence of informality in the sector, the paper argues, should out of necessity first proceed from an understanding of its rationality. Only then will it be possible to link sustainable mining reforms to broader national and international extractives sector roadmaps, including the AMV.

Key words: Artisanal mining, formalization, informality, Africa Mining Vision, Liberia

1. Introduction

The Africa Mining Vision (AMV), a comprehensive policy framework created by the African Union in 2009, seeks to ensure that African nations utilize their mineral resources strategically for broad-based, inclusive development. Now a decade after its inception, the implementation of AMV policies has been challenging, as has its goal of fostering the ‘transparent, equitable and optimal exploitation of Africa’s mineral resources to underpin broad based sustainable growth and socio-economic development.’ While much of the focus of the AMV has been on large-scale, capital intensive mining investment, one of its objectives is to boost and support artisanal and small-scale mining (ASM) activities – low-tech, labour intensive mineral extraction and processing. More specifically, following Cluster 4 in the AMV’s Action Plan, AU member states, it is stated, should seek to formalize ASM, providing technical support to the sector, prioritizing it as a focus of national poverty reduction strategies.

The AMV recognizes the developmental importance of ASM across the African continent, supporting much recent academic research that has been carried out in recent years. While it is now widely accepted that ASM constitutes a major source of livelihoods and employment for millions of poor people around the world, the precise number of artisanal miners in sub-Saharan Africa is

unclear. One estimate suggests that as many as 20 million individuals are directly employed by the sector, with an additional 100 million people indirectly dependent on its many interrelated activities for their livelihoods (Hilson et al, 2017: 80). Yet, despite its importance as a non-farm economic activity, most ASM activities are firmly situated in ‘spaces’ of persistent and intractable informality, often characterized by exploitation, trans-border crimes and some of the worst forms of human rights violations, including child labour (Salo et al, 2016; Maconachie and Hilson, 2016; 2011; Schipper et al 2015; O’Driscoll, 2017; Amnesty International, 2016; Banchirigah 2008; ILO 1999). By and large, for most governments and policy makers in sub-Saharan Africa, the sector has been defined by its illegality and informality, thriving outside the formal regulation of states, with most activities unlicensed and operating with little or no formal support from regulators (Okoh and Hilson 2011, International Labour Organization 1999; Siegel and Veiga 2009). In many African countries, the largely unregulated nature of ASM reinforces its informality, as transactions among elite actors are strengthened by informal practices within the confines of informal ‘spaces’ (Hilson et al, 2017), leading to loss of revenues for governments and low returns for artisanal miners at the bottom of the value chain.

Unsurprisingly, the picture painted of the many missed opportunities for mineral-rich countries to effectively harness the potential of ASM, has led to persistent calls for formalization, including from within the AMV, portraying the process as a panacea that is capable of permanently solving the problems of artisanal operators (Siwale and Siwale, 2017; Siegel and Veiga, 2009; ILO 1999; Maconachie and Hilson 2011; Salo et al, 2016). The case for the formalization of ASM has been made by academics, practitioners and international development agencies, such that it has now almost become irrational for governments not to pursue it, given the many benefits (Siegel and Veiga, 2009). For example, Siwale and Siwale (2017) have argued that proponents of formalization envisage that the process will lead to operators having secured titles, invariably leading to the consolidation of property laws and their enforcement by states. Formalization can also promote the visibility of miners, and provide a framework through which governments can facilitate technical support and lines of credit for miners. It is thus argued that formalization will invariably result in governments being able not only to tax miners, but to effectively provide a framework to ‘better govern and consequently manage the social and environmental impacts of mining’ (Salo et al, 2017: 1058 – 1059), as well as allowing miners to better forecast their taxes, ‘...rather than having to pay the hidden cost of bribes’ (Siegel and Veiga, 2009: 52).

The ‘rationality’ argument for the formalization of ASM therefore makes the following question inevitable: if the sector has the potential to reduce unemployment, support livelihoods and alleviate poverty in developing countries, while simultaneously boosting governments’ revenues, why has informality become so entrenched in the sector, reproducing itself in ways that continuously undermine reforms? Indeed, in many African countries, it would appear that in contrast to the increasing recognition of the importance of ASM by developing countries’ governments and donors (Hilson et al, 2017; Maconachie and Hilson 2011), the sector’s informality has become entrenched and intractable (Schoneveld et al. 2018; Jonsson and Fold, 2014).

Drawing upon multi-sited fieldwork carried out in the northwest of Liberia (see Figure 1), and complemented by semi-structured interviews carried out with government officials, policy makers and donors in Monrovia, this paper explores the entrenched and persistent informality that characterizes the country’s artisanal mining sector. In doing so, it argues that while reinforcing the impassioned and at times proselyting approach of convincing local and international stakeholders of the many benefits of formalization, an understanding of the rationality of informality, at least from the perspectives of those who profit from it, is critical for understanding its persistence. Only then will efforts to link the formalization process to broader extractive sector reforms, such as the AMV, gain traction. One of the greatest challenges for formalizing ASM is that the persistence of

informality is being driven by the many vested interests of elite actors who continue to control decision making processes in the sector.

In exploring the case of Liberia, the arguments developed in the paper contribute to a growing body of critical literature on the formalization of ASM, which recognizes the need for more grounded research that explores the complex political-economic realities that drive informality. In doing so, the paper builds on, and adds to, the work of other scholars who provide similar case study analysis of formalization in other contexts. For example, Banchirigah (2008) and Siwale and Siwale (2017), provide insightful case studies on the persistence of informality in Ghana and Zambia respectively. Alternatively, Maconachie and Hilson (2011) further make reference to some of the challenges in Sierra Leone, while Van Bockstael (2014) provides some of the first detailed analysis on Liberia.

Figure 1: Study Sites in Liberia



However, while this paper alludes to the limited capacity of states to effectively formalize ASM, as other previous papers have done (see, for example, Siwale and Siwale 2017; Maconachie and Hilson 2011; Banchirigah 2008; Van Bockstael, 2014), it also goes further to explore how elite bargaining strategies link and solidify relationships between national and local elites. Moreover, it illustrates how the rational, albeit problematic, distinction officials make between personalised sources of revenue and those accruable to the state, contribute to the reinforcement of the persistence of informality in the sector. This, of course, has important implications for the uptake of formalization strategies within the AMV. Ultimately, the paper finds that ASM is rapidly changing, outpacing the response rate of policy makers, who, even when there is the will to reform, continue to adopt and implement ‘hit-and-miss’ approaches.

The paper is structured as follows. Following this introduction, section two examines the foundations of informality in Liberia’s AM sector in further detail, contextually situating the paper’s argument. The third section then provides a critical overview of post-war reforms in ASM, suggesting that the imperative of winning international approval and the need to lift diamond export

sanctions, more than any other consideration, were central to such reforms which were eventually hybridised. Section four analyses and critiques the most recent reform programme *The Regulatory Roadmap for the Artisanal Mining Sector in Liberia*, which aims to decentralize the licensing process and adopt mining cooperatives to formalize the sector. The fifth section provides some concluding remarks.

2. Liberia and the historical foundations of informality

Liberia has never been able to successfully develop a large-scale diamond mining industry, mainly due to the lack of commercially viable kimberlite deposits. Unlike neighbouring Sierra Leone, the country has a relatively small diamond mining sector (Interview with Manager, Government Diamond Office, Monrovia 27 April 2017; Bockstael 2014; Shaw and Deady, n/d). Although the first discoveries of diamonds in Liberia were reported in 1906 (Bockstael 2014), it was not until the 1950s and 1960s that the first major finds were made, when the Diamond Mining Company of Liberia was able to identify several potential kimberlite dykes as part of its exploration programme (Shaw and Deady, n.d.). The diamond industry has consequently been dominated by artisanal mining, most of which remains largely informal and unregulated. The paucity of reliable data on the ASM sector means that the number of artisanal operators is unclear, which officials note is one the major challenges impeding planning for the sector (Deputy Ministry of Planning, Ministry of Mines, Monrovia, 5 May 2017; Deputy Director of Mines, Monrovia, 26 April, 2017). The Ministry of Mines has officially registered about 1,000 in the gold and diamond mining sector, but it is public knowledge that there are thousands of illegal miners operating all over the country (Deputy Ministry of Planning, Ministry of Mines, Monrovia, 5 May 2017). Other studies have estimated that the sector provides a livelihood for some 100,000 miners in the country (Sandhu, 2016; World Bank, 2012). There are no reliable estimates of the actual production and value of Liberia's diamonds, but for 2016 and 2015, the country exported about US\$ 30 million and US\$ 35 million of diamonds respectively. One estimate puts the country's annual output of diamonds in 1956 at 1 million carats (Bockstael, 2014), declining considerably in the 1970s to 600,000 carats and cumulatively in the last 50 years to 14 million carats (Shaw and Deady, n.d.: 3).

However, given the political economy of the country's diamond mining industry, it is important to view diamond production and export figures with caution. The 'open door' policy of the Tubman government in the 1950s made Liberia an appealing destination for investors (World Bank 2016; Forde, 2011; Clower et. al, 1966; Interview with former Minister of Information, Government of Liberia, Monrovia, 28 August, 2017), giving the country an economic advantage which enabled it to attract smuggled diamonds from its neighbours. This attraction was further enhanced by the country's use of the United States dollar as its primary currency, as well as the limited imposition of taxes on imports and exports (Greenhalgh, 1983). The impact of smuggled Sierra Leonean diamonds in boosting Liberia's diamond exports was significant, such that President Tubman is reported to have acknowledged that his country's exports constituted mostly of diamonds from Sierra Leone (Bockstael, 2014; Stanley, 1970). This mismatch between Liberia's actual diamond production capacity and what it exports has persisted to this day. For example, while the Ministry of Lands, Energy and Mines (MLEM) reported the total diamond export for 1998 to be US\$ 800,000, officials in Belgium estimated actual diamond imports from Liberia during that year to be US\$ 217 million (United Nations, 2000), indicating that much of its export had come from neighbouring countries, especially Sierra Leone.

Indeed, interviews with current and past Government of Liberia officials indicated that for a long time, the mining of diamonds was not a major preoccupation for either the Government or local

people, given that the country was almost entirely reliant on the mining revenues it derived from the operations of the country's three large-scale iron ore mines (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017). This dependence has in many ways reinforced the large-scale mining bias held by the Government towards the sector. As the Deputy Director of Mines put it:

What I gather is that there is a place in the West, in the Kumo area, going to Sierra Leone, where people used to find diamonds, because there's a Kimberlite dyke that runs along that area. What I heard was that during the Tubman era, people were finding diamonds, especially after a heavy downpour of rain. So people started to mine. But people from Sierra Leone crossed the border to come and also mine. So the Government stopped it. But later, the Government realized that there were some economic benefits, as it was making the people self-employed [and] creating employment. So the government established the bureau of mines (Interview with Deputy Director of Mines, Monrovia, 26 April, 2017).

Although by the late 1970s some companies were exploring and operating along the Yambasi Creek and Lofa River, many focused exclusively on alluvial diamond deposits. According to Shaw and Deady, the seasonal nature of alluvial mining characterized by 'flooding, poor access and the erratic distribution of diamond-bearing gravels meant that many companies were ultimately unsuccessful' in sustaining their operations (Shaw and Deady, n.d.: 4). The country's alluvial diamond mines were later nationalized in the 1980s by President Samuel Doe, under the pretext of 'maximizing benefits' from the country's wealth. But nationalization quickly became a basis for the personalization of the country's diamond mines by President Doe and his crony, Charles Taylor, who was at the time the head of Liberia's General Services Agency (Interview with former Minister of Information, Government of Liberia, Monrovia, 28 August, 2017). Doe and Taylor subsequently had a disagreement over the 'management' of diamond proceeds, which eventually led to the redeployment of the latter, and his subsequent departure from the country (Interview with former Minister of Information, Government of Liberia, Monrovia, 28 August, 2017). During the second Liberian civil war, in addition to the financing of his war efforts, it has been reported that Taylor who had been elected President in 1997 (Levitt, 2005), frequently demanded diamonds from artisanal miners in return for protection (Interview with Senior Patrolman, Varguay Mining Agency, Lofa Bridge, 16 May, 2017), and the personalization of revenues accrued from the country's natural resources, including timber, became a hallmark of his rule (Global Witness, 2001).

3. Post war reforms and the reinforcement of informality

Since the end of the war in 2003, the Government of Liberia has taken steps to reform its artisanal mining sector. However, many of these reforms have been largely driven by external pressures, either as part of conditions for the country to be able to export diamonds through the internationally accepted and recognised multilateral Kimberly Process Certification Scheme (KPSC), or as part of donor conditionalities for the delivery of aid (Interview with Western donor official, Monrovia, 14 September 2017). For instance, cognizant of the need to secure debt relief and to boost Liberia's image as a reform minded government, being EITI compliant became a key priority of President Ellen Johnson Sirleaf after she was elected in 2005 (O'Sullivan 2013:11). Although she demonstrated significant political will in order to get the UN to lift sanctions which had been imposed on the country in 2000 (O'Sullivan 2013:11; Sovacool and Andrews 2015; Bockstael 2014), her commitment to reform, however, progressively declined (Interview with Head of the Liberia Extractive Industry Transparency Initiative, Monrovia, 5 April, 2017; O'Sullivan 2013:11; Sovacool and Andrews 2015).

With respect to the regulation of the artisanal mining sector, the Government subsequently adopted a dualistic approach, allowing the old pre-war system governed by mining agencies to coexist with

a new and parallel structure to implement the framework of the KPSC, to be overseen by regional officers. As part of the condition for the lifting of the sanctions on diamond exports in 2007, the Government established the Government Diamond Office (GDO), with the further creation of 10 regional offices in each of the country's mining zones, through which the movement and certification of diamonds through the KPSC could be managed (Interview with Regional Officer, Government Diamond Office, Lofa Bridge, 16 May, 2017; Interview with Regional Officer, Government Diamond Office, Mano River Kongo, 14 February, 2018). Although, in theory, the GDO regional officers are part of the MLEM, they are relatively well-resourced with motorbikes and salaries more than three times that of the mining agents. However, they are also somewhat physically isolated, being housed in better quality offices than the mining agents, who have traditionally regulated artisanal mining activities at the field level (Interview with Regional Officer, Government Diamond Office, Mano River Kongo, 14 February, 2018). As such, the post-war artisanal mining reforms that have been propelled by international pressure, have not only led to the creation of two parallel administration systems for mining activities, but have also led to a hierarchical and administratively diverse governance structure, in which different sets of actors are motivated by different incentives, leading to administrative competition, rather than cooperation. Indeed, interviews with mining agents and GDO regional officers show the disparity between the conditions of service for the two sets of personnel and their adaptation strategies. As one mining agent explained in relation to the lack of a suitable office structures:

There is no office built by the Ministry for mining agencies. Sometimes you just take one room and make it your office because you don't have an office. I built this one. Some miners are good and we ... [tell] them that we can't keep waiting for government even though they have their policy, so we need help. Then some send people to help with the bricks, some provide the zinc, some provide the cement and other things (Interview with Mining Agent, Gold Camp, 18 May, 2017).

The difficulties of formalizing the artisanal mining sector in Liberia have often been attributed to the many capacity challenges faced by the state (Bockstael, 2014). However, one can also see a deliberate act of prioritization that privileges the GDO over the mining agents, given that the certification of diamonds in ways that meet the requirements of the KPSC is more important than the general regulation of the sector. A further challenge has to do with the staff needed to effectively regulate the sector. All the mining agents interviewed in this study indicted that they had a serious shortage of staff, with one agent noting, "most of our workers are not on salary and they are not on the pay roll of the Ministry (Interview with Mining Agent, Lofa Bridge, 16 May, 2017). One mining agent further explained how he would divide his monthly salary of US\$ 100 among himself and his two volunteer patrolmen: "If I take L\$ 10,000, I will come and give them L\$ 3,000. One would get L\$ 1,500 and L\$ 1,500 for the other" (Interview with Mining Agent, Gold Camp, 18 May, 2017).¹

The significant differences in conditions of service and access to other resources have led to administrative jealousies and tensions, which have been further exacerbated by an initial lack of clarity in the roles of GDO regional officers in the mining sites (Interview with Regional Officer, Government Diamond Office, Mano River Kongo, 14 February, 2018). Mining agents have questioned the rights and powers of regional officers to visit the mines, as they were initially expected to wait for miners to bring diamonds to them to initiate the KPSC (Interview with Mining Agent, Gold Camp, 18 May, 2017). Although many mining agents have justified their concerns on the basis of preventing the regional officers from being bribed in by miners (Interview with Mining Agent, Gold Camp, 18 May, 2017), their claim of administrative overreach by the latter could also be seen as subterfuge and a rather insidious way of preventing the regional officers from

¹ At the time of writing, 1US\$ was equivalent to L\$ 125.

understanding the relationships that they have forged with the miners. As one GDO regional officer noted during an interview:

Mining agents keep complaining that we have better conditions of service, but they make more money than us. They have the clearance fees, and deal with diamond theft cases from which they can get money from miners when diamonds are recovered (Interview with Regional Officer, Government Diamond Office, Mano River Kongo, 14 February, 2018).

Apart from the need to meet the requirements of the KPSC, there are other imperatives underlining its prioritization over the general formalization of artisanal mining, which allow officials to make a distinction between the licencing and general regulatory regime and the KP. The Mineral and Mining Act (MMA) of 2000 identifies three classes of miners – A, B and C. Class A miners are predominantly multinational corporations that use heavy machinery to mine for minerals. As a first step, they carry out up to five years of exploration and reconnaissance, before identifying an exploitable deposit and commencing full mining operations. Class B operators are small-scale firms which can be jointly owned by foreign investors and Liberian nationals, and are mainly engaged in the mining of gold (there were no small-scale diamond mining companies operating at the time of writing). Like Class A operators, they are permitted to use heavy machinery. On the other hand, by law Class C licences are only issued to Liberian nationals. As explained by the Deputy Director of Mines:

Class C serves as employment for the typical Liberian. What happens is that if he takes 25 acres of land, and mines diamonds on it, he brings in shovel boys – six, seven, eight, nine or ten of them. It depends on his financial strength. We're not in control over who works on their claims or this and that, even though we monitor them for bad mining practices and prevent illegal mining (Interview with Deputy Director of Mines, Monrovia, 26 April, 2017).

Class C licences are usually issued for an area not exceeding 25 acres, which Van Bockstael (2014) has described as 'unrealistically high', and each miner is entitled to a maximum of four claims. The relatively large area that a Class C licence covers is partly reflective of the lack of geological data, as miners employ a "guess and miss approach" on the claims (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017). Under a newly developed roadmap for the formalization of artisanal mining, the MLEM plans to reduce the size of mining claims from 25 acres to more 'realistic' plots which miners would be able to manage. Even though the law prohibits the use of heavy machinery in artisanal mining claims, the Environment Protection Agency (EPA) has recently started issuing out 'special permits' to artisanal miners on the advice of the Ministry of Lands, Energy and Mines, especially for those registered as part of cooperatives (Interview with Assistant Manager, Environmental and Social Impact Assessment, EPA, Monrovia, 27th April, 2017).

The regulatory regime of artisanal mining remains informal, and it is within this persistence of informality that one can begin to understand the prioritization process of the government. A baseline survey conducted before the implementation of a USAID supported project 'Property Rights and Artisanal Diamond Development' (PRADD) revealed that 61.8 percent of miners surveyed were illegal and that many of them were known to the local authorities and permitted to mine by the mining agents (Linkow, 2011). Van Bockstael's (2014) study of the interaction between miners and local mining agents also revealed a similar trend in which informal agreements made between them served as localised, albeit illegitimate form of formalization. The end-line survey for the PRADD project reported two years later that 'about three quarters of miners reported having no valid licence for their claim' (Tetra Tech ARD, 2013: iii). The process of securing a Class C licence provides considerable insight into the rationality of informality, and sheds light on how different actors within the vertical and hierarchical registration chain, benefit from informality.

Liberia's mining regions are divided into different mining zones. Each zone is then in turn sub-divided into smaller zones, each of which is headed by a mining chairman who is elected or selected by local miners. The long process of registration thus starts with the mining chairmen together with their teams of volunteer patrolmen, who are responsible for checking the suitability of an area for which a miner would need a licence. Interviews with miners revealed that they must pay a non-refundable fee of US\$ 20 for the chairman's recommendation letter to the mining agent. Upon receipt of the mining chairman's recommendation letter, the mining agent would then visit the prospective mining site, and if satisfied, issue a 'clearance' for an unreceipted fee ranging from US\$ 100 – 150. Whereas in theory the 'clearance' is a recommendation for miners to proceed with their applications to the MLEM in Monrovia (Interview with Mining Agent, Gold Camp, 18 May, 2017; Interview with Mining Agent, Lofa Bridge, 16 May, 2017), in practice, it has been used as a temporary licence for the miners to commence mining activities while they work to raise the rest of the licence fees, a practice which invariably encourages informality (Sandhu, 2016; Bockstael, 2014). One female miner near Lofa Bridge alleged during an interview that she was asked to pay US\$ 150 by the local mining agent, because she was a woman, emphasizing that men were often asked to pay less (Interview with miner, Near Lofa Bridge, 17 May 2017).

The miner's allegation of paying more because of her gender is plausible, but what happened to her should be understood beyond notions of gender-based exploitation, as it reflects the general predatory characteristic of the licencing process, with officials exploiting vulnerable and unsuspecting miners at every stage of the process, regardless of their gender. In a related vein, a recent study of everyday corruption in Francophone West African revealed that public officials take advantage of the desperation of service users in obtaining services, as well as their general lack of knowledge of official charges (Blundo et al, 2006). In the case of Liberia, the clearance fee is an example of an administrative practice which although illegal, has become completely acceptable as part of everyday interaction within artisanal miners. One GDO regional officer who was once himself a mining agent explained that:

The payment of a clearance fee is an old age practice. It started way back in the 1950s and 60s, and it's not paid into government accounts. It remains with the mining agent. The mining agent has patrolmen who are not paid salaries, it is this money he uses to give them something like a stipend, and everybody knows that (Interview with Regional Officer, Government Diamond Office, Mano River Kongo, 14 February, 2018).

Viewed in a different light, this practice is akin to the MLEM abdicating its responsibility, with the understanding that the mining agents are engaged in practices that sustain the presence of a vital state institution and function, albeit through exploitative and illegal means. Although it is not clear whether proceeds from the clearance fees eventually find their way to Monrovia, given that officials in the MLEM are aware of the practice, the large number of unassigned mining agents waiting to be (re) deployed likely serves as an incentive for those agents 'in post' to seek 'protection' from their bosses in Monrovia on patron-client terms (Interview with Mining Agent, Gold Camp, 18 May, 2017). Indeed the chain of officials that miners have to navigate does not stop with the mining agents in the regions. Miners' applications must go through at least four more stages, involving negotiations at the office of the Chief of Records, the Cadastre Office, with the Director of Mines, and with the Assistant Minister (Interview with Mining Agent, Lofa Bridge, 16 May, 2017; Interview with Mining Agent, Gold Camp, 18 May, 2017). In explaining her experience navigating the MLEM in Monrovia, the female miner who alleged paid US\$ 150 to the mining agent recounted the situation:

Any office you enter you'll have to give something. You do it small, small. You go to the other office, and you give them something. You'll have to spend a lot of money until you get your licence. Despite this, sometimes it'll take four or more months to get your licence (Interview with miner, Near Lofa Bridge, 17 May 2017).

Once the miners submit their documents to the MLEM, a surveyor is sent to survey the site, at which point the miner will have to pay US\$ 150. Following this, another US\$ 150 is paid for the actual Class C licence (Interview with Deputy Director of Mines, Monrovia, 26 April, 2017). Various other studies have documented the similar challenges that miners must endure to enter the legal domain, most notably having to pay illegal fees and facing long delays in securing their licences (Sandhu, 2016; Van Bockstael, 2014; Hilson and Bockstael, 2011; Tetra Tech ARD, 2013; Linkow, 2011). In fact, for the typical artisanal miner:

The most important reason for not obtaining a license was said to be the cost. In addition, several miners reported long delays of up to six months in receiving their licenses even after they had paid the fee (Tetra Tech ARD, 2013: 5).

The cumulative effect of this bureaucratically induced informality which is the result of the 'rational' calculations that officials make, has been widespread illegal mining operations. In addition to the exorbitant licencing fees and the persistent delays in the issuance of licences, interviews with civil society activists revealed an even bigger challenge that involves the direct ownership of several mining claims by officials of the Ministry of Mines. One official who has worked in the extractive sector for a long time, including for the Government, industry and at the time of writing, was with one of the country's main donors, painted a picture in which vested interests have played a significant role in reinforcing the absence of political and administrative will to formalize and effectively regulate the sector. He noted that:

Artisanal mining is the most challenging part of natural resources governance in this country. It is a sector in which I think not much has been done in terms of regulation. From the look of things entities of government and officials have a greater hand in artisanal mining. They make it look simple; they make it look common; and licenses are given to some of them who are officials; they own pits and mining sites, because people think it is smaller. But in terms of resources, in terms of what comes from it, it is huge. But the promotion of it for the Government and the public good is actually downplayed (Interview with donor official, Monrovia, 9 May, 2017).

Such sentiments suggest that officials make a rationalized distinction between resources they can personalise on the one hand, and those accruable to the state and the general citizenry, on the other hand. This, of course, is a practice that is not only restricted to the governance of artisanal mining, but also extends to the management of resources flowing from the large-scale mining sector. For example, interviews with Government and donor officials, as well as civil society activists, revealed the extent to which the Social Development Fund (SDF) established by President Sirleaf in 2006 – a fund designed to ensure that large-scale mining companies contributed to the development of mining host communities – has been captured by a range of elite actors, including members of the house of legislature, county superintendents and district commissioners (Interview with donor official, Monrovia, 9 May, 2017; Interview with Head of the Liberia Extractive Industry Transparency Initiative, Monrovia, 5 April, 2017; Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017; Interview with Controller General Ministry of Finance, Monrovia, 29 August, 2017). The General Auditing Commission of Liberia, which has been auditing the management of the SDF, has published several reports detailing the widespread misuse of the fund (Gaye, 2014a; 2014b). As is noted in one report focusing on Nimba County, which hosts the country's biggest iron ore mining company, ArcelorMittal:

The activities undertaken by the Nimba County Administration in the management of the Social and County Development Funds were marred with a number of irregularities. The financial irregularities noted amounted to US\$1,449,710.60 and involved unsupported payments and withdrawals, third party payments, non-compliance with relevant laws and regulations (Gaye, 2014a:50).

Focus group discussions with communities affected by the operations of the company in Nimba County – Gbapa and Zolowe – indicated that while they are generally knowledgeable of what the company should be contributing annually as part of its contributions to community development, the funds were systematically captured by elites in several layers of government, leaving communities to deal with the negative consequences of mining, including environmental degradation. While informality within the extractive sector is prevalent, its intractability is nonetheless an issue that needs to be recognised if effective and sustainable measures to address it are to be found. The most recent initiative the Government has put in place to formalize the sector – *The Regulatory Roadmap for the Artisanal Mining Sector in Liberia* – appears to have done little so far to address the root causes of the problems that mining communities face.

4. Can a ‘roadmap’ lead to the formalization of artisanal mining?

In 2016, the MLEM launched *The Regulatory Roadmap for the Artisanal Mining Sector in Liberia*, a blueprint for the formalization of artisanal mining. The document identifies eight key policy themes: 1) decentralization of MLME governance structures; 2) improvement of accessibility to artisanal mining licenses; 3) tracing and reporting of mineral production and sales; 4) piloting of umbrella organizations/‘cooperatives’; 5) spatial mapping of artisanal mines in Liberia; 6) improvement of environment management practices; 7) enhancement of health, safety and security practices; and 8) demonstration of social responsibility (Sandhu, 2016: 16). Perhaps the most striking aspect of the document is its clear definition of formalization within the context of Liberia, as follows:

The process of implementing reforms and regulations that strengthen the MLME’s institutional and financial capacity to govern the artisanal mining sector; that enhances tracing of minerals and monitoring of the sector; that enhances the environmental and social performance of the sector; and - most crucially - that provides positive incentives and benefits to miners, host communities and the government, in the form of livelihoods development and increased revenue generation from the sector (Sandhu, 2016: 28).

Given the lack of clarity in the literature as to what formalization actually entails, Liberia’s roadmap definition, which is context specific, provides a rare departure from the vague framework within which the process is often discussed. Here, formalization involves building the capacity of the MLEM to effectively manage the sector, while at the same time increasing the Government’s revenue, ensuring that the process is one that leads to win-win-win outcomes for the Government, miners and communities. However, given the aforementioned challenges that have inhibited the formalization process, it is intriguing that the government has suddenly developed an interest in formalizing the sector. Commenting on the large-scale mining bias stance of the past, a World Bank publication noted that, ‘the Ministry of Lands Mines and Energy (MLME) focuses on large-scale mines, viewing artisanal mining as an impediment to progress in the mining sector’ (World Bank 2012: 13), and has therefore not invested much in the sector, given the limited return on investment. For instance, although the implementation of the KPCS led to a US\$ 1 million increase in government revenue from the artisanal mining sector in 2008, this was achieved at the high ‘implementation cost of close to US\$ 10 million, while up to 90% of mined diamonds continue to leave’ the country unofficially (Carstens et al. 2009: 64). While it is plausible that issues of value for money have previously shaped the government’s position, the roadmap provides clear insight into the rationale for the current move, which stems largely from the current financial difficulties of the Government. These financial challenges were further compounded by the 2014 drop in commodity prices, especially of iron ore, on which Liberia’s budget had been anchored, and the impact of the Ebola epidemic of 2014–2015. As the document noted:

Declining global commodity prices, particularly the rapidly declining price of iron ore which constitutes a significant mineral endowment in Liberia, as well as the adverse impacts of the Ebola outbreak in 2014 and 2015, have significantly reduced investor confidence in Liberia. With limited large-scale industrial mining, and an absence of a formalized artisanal mining sector, mining is not producing the concrete socio-economic benefits that stakeholders had envisioned (Sandhu, 2016:10).

Although one of the key objectives of most formalization programmes is ensuring that the government derives revenue from the sector, such a goal can easily conflict with the objective of improving miners' livelihoods and alleviating poverty, if the process is not carefully thought through. The Deputy Minister of Mines responsible for the development and implementation of the roadmap, de-emphasized the imperatives of taxation in the Government's drive to formalization (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017), even though the Liberia Revenue Authority (LRA) has been a key stakeholder throughout the consultation process, leading to the development of the roadmap (Sandhu, 2016). One donor official supporting the process raised concerns over the taxation plans of the Government, noting that taxation without any meaningful investment in the sector to support the miners, either in the form of access to credit or equipment, would likely serve as the biggest threat to the implementation of the roadmap (Interview with Western donor official, Monrovia, 2 May, 2017).

At the centre of the strategy that is laid out in the roadmap, the Government has identified mining cooperatives as the main conduit through which it intends to formalize the artisanal mining sector (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017; Sandhu, 2016). Each cooperative will be composed of a minimum of 15 miners and provided with 'the opportunity for members to engage in cost-sharing, and ...enhanced self-monitoring of the artisanal mining sector, with the intended result of reduced smuggling and theft of minerals' (Sandhu, 2016; 8). The Government's rationale for this move is that given its lack of capacity to effectively trace the movement of diamonds from the mines, miners would be willing to monitor the movement of stones through peer monitoring – a process akin to setting up organizations that would perform the role of a secret police force. As the Deputy Minister of Planning in the MLEM noted:

Anything that is found in a community must be taken to the regional offices to be registered. The logic is the Government can never police that, but the community can do that. As for today, everything happening in those communities you know, I know, people know about it. But as it is right now, people say it's the business of the Government. What we're saying is, yes, it's the Government's business, but it's also your business (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017).

During interviews, government officials compared the use of cooperatives as the main conduit for the formalization of artisanal mining, with their 'successful use in agriculture over the years'. Consequently, the Cooperative Development Agency (CDA), a semi-autonomous institution, has been charged with the role of training miners on the workings of cooperatives (Interview with the Acting Deputy Registrar of the Cooperative Development Agency, Monrovia, 27 August, 2018; Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017). However, the assumption that cooperatives will be equally successful in formalizing artisanal mining without any credible evidence is problematic, given that the level of risks prevalent in mining is far higher than in agriculture, where a farmer is usually guaranteed some degree of harvest, no matter how bad. Unsurprisingly, interviews with miners, supporters and donors demonstrated that the process of establishing cooperatives faces significant risks of failure, partly

due to a severe dearth in knowledge of their use in mining amongst stakeholders. As one donor official noted:

That's the reason why, when it comes to the issue of the formation through cooperatives...we've always said it still needs a lot of investigation, a lot of thinking and research. For us, that's our position" (Interview with Western donor official, Monrovia, 2 May, 2017).

The consequences of the lack of a sound base of knowledge on the conditions under which cooperatives can be set up, already started manifesting themselves, even before the government has been able to secure funding to implement its roadmap. Fieldwork revealed that there were extreme discrepancies in the perceptions and expectations of stakeholders in relation to what the use of cooperatives would achieve for them. For example, while the government expects to increase its revenues from the sector, it is not planning to reinvest funds in the organization of the cooperatives. This stance is opposed to that of miners, who do not see a successful implementation of the roadmap without a significant injection of financial and other support into the cooperatives, especially amidst dwindling alluvial diamond and gold deposits. When asked about their expectations of cooperatives during a workshop organized for artisanal miners by the authors, the mining Chairlady of Weajue, a gold and diamond mining town in Western Liberia, explained that:

We were invited to a meeting at Lofa Bridge last year. In the meeting attended by the Minister and the people from the CDA, we were told that the government was going to help us form cooperatives. We need help from supporters, as it is now difficult to mine here. That is why people are leaving here, because to mine you need machines, which we don't have. Only government and investors can help us (Interview with Mining Chairlady, Weajue, 8 February, 2018).

The Chairlady spoke for many of her peers, raising the difficulties that miners face in attracting and retaining support in a high risk, low return sector. Moreover, it was pointed out that setting up of cooperatives without the necessary financial input, has resulted in the reinvention of the role of brokers, supporters, dealers and exporters. Ironically, these individuals were not included in the consultations that led to the development of the roadmap, principally because the Government thought their presence would have adversely affected deliberations (Interview with Deputy Minister for Planning, Ministry of Lands, Energy and Mines, Monrovia, 5 May 2017; Interview with President of the Brokers Association, Monrovia, 27 August, 2017). During fieldwork, brokers expressed concerns that they were not involved in the consultations and feared that the Government was deliberately targeting them, a claim that Ministers and other government officials refuted. Despite this, they have quickly occupied the financial void created after the launch of the roadmap, by mobilizing and organising miners into cooperatives, paying for their licences and providing all the support needed for their operations (Interviews with Cooperative Manager, Mano River Kongo, 6 February, 2018; Cooperative Member, Mano River Kongo, 8 February, 2018; CEO, Hard Work Cooperative, Mano River Kongo, 5 February, 2018).

All the cooperatives operating in Mano River Kongo in Western Liberia at the time of fieldwork were set up by Monrovia based dealers and exporters, some of whom had received support from foreign investors (Interviews with Cooperative Manager, Mano River Kongo, 6 February, 2018; Teacher/Miner, Mano River Kongo, 7 February, 2018). Building on their fears of the Government targeting them, the old players – dealers, brokers and exporters – have readjusted to the new reform agenda in a way that maintains the old structure of artisanal mining, albeit under cooperatives, with investment and sharing arrangements remaining the same. Further, the MLEM's incentive of allowing cooperatives to use heavy machinery on their mining claims, which only the brokers, dealers, and exporters can afford, has facilitated the emergence of a unique form of mining which is neither artisanal nor small-scale – while they are licenced under class C, their mode of operations

reflects that of Class B licence holders. In interviews with miners, it was noted that although the widespread use of heavy machinery on mining claims provides short-term financial benefits for them, it nonetheless represents the biggest threat to the long-term sustainability of their livelihoods, as it rapidly depletes the residual alluvial diamond deposits.

In addition, although the Government has not committed to providing direct financial support to the cooperatives, the promise of indirect support through tax wavers, including on the importation of heavy vehicles and machinery, has also incentivised Monrovia-based brokers, dealers and exporters. In anticipation of taking advantage of these tax incentives, many individuals have set up mining, as well as multi-purpose mining-farming cooperatives, capitalizing on the dove-tailing nature of agriculture and mining, two economic activities that complement each other in rural West Africa (Maconachie and Binns, 2007). One exporter who had taken for granted the MLEM's promise of securing tax wavers for the cooperatives on the importation of heavy duty vehicles and machinery, was disappointed when the Liberia Revenue Authority insisted he should pay the full taxes on heavy duty vehicles he had imported. He subsequently had to reroute the vehicles through Sierra Leone, which at the time provided concessions for mining equipment, and then into Liberia across the land border (Interview with Cooperative Manager, Mano River Kongo, 6 February, 2018). While the importer clearly wanted to evade taxes, his experience nonetheless illustrates the coordination challenges with which stakeholders have to contend when formulating and implementing policies, particularly when faced with different incentives and perceptions of the outcomes of reform processes. In this case, a policy promoted by one Ministry – the MLEM – to encourage the formalization of artisanal mining, is undermined by another agency of government – the Liberia Revenue authority (LRA) – whose insistence on the payment of the full tax might be influenced by revenue collection targets set by the Ministry of Finance, which was also represented in the consultations.

Further, interviews and focus group discussions with miners and other local authorities suggest that some individuals remain suspicious of the Government's motives, given the tendency for cooperatives to facilitate exploitation and elite capture. In Gondor's Town, Western Liberia, miners recounted how a Monrovia-based businessman who had links to government officials and the President's family, had attempted to set up a multi-purpose cooperative in 2012. It was reported that he collected monies from the miners as their contribution to registration costs, but actually registered the cooperative in the name of his family instead (Focus Group Discussion with Mining Chairman, Miners and Patrolmen, Gondor's Town, 18 May, 2017). It was also reported that he was given mining and agricultural equipment, as well as rice, but used them for his own private use. This experience seriously dented their belief and confidence in cooperatives as vehicles through which they could organize themselves. As one of the miners of the town noted:

When we went to Lofa Bridge, we told them that we wouldn't agree to people coming from outside, to come and fool us again. For any cooperative that is to be established, our people will have to lead it. If not, we'll not join it (Focus Group Discussion with Mining Chairman, Miners and Patrolmen, Gondor's Town, 18 May, 2017).

Clearly, the idealized views held by Government officials in relation to the potential of the cooperatives to formalize artisanal mining, is not shared by the mining communities. Although the roadmap to formalization is yet to be fully implemented, experiences so far have produced a mixed-bag of outcomes which have further embedded pre-existing informalities in the sector.

5. Conclusion

Local actors, especially those engaged in regulating the artisanal mining sector, are sometimes portrayed as being oblivious to the benefits that will accompany formalization – e.g. secured livelihoods for miners and increased tax revenue for the government. Indeed, much research has argued that the preservation of the dual formal and informal mining economies is an ‘economically irrational move for the governments of nation-states’ to make (Siegel and Veiga, 2009: 52). However, the fact that the persistence of informality in the sector can sometimes be rational, at least from the point of those who benefit from it, is seldom considered in such analyses. Artisanal mining has been at the heart of elite bargaining schemes in Liberia for many years, serving as a source of personalised wealth that links Monrovia-based patrons to clients in mining regions. Although the imposition of sanctions on the country disrupted these relations mildly, this did not lead to significant shifts in officials’ modes of elite capture and accumulation.

The lifting of diamond export sanctions in 2007 represented a significant opportunity for the Government to increase revenues from the export of diamonds, and for donors and other external actors to jointly work together to carry out structural reforms to the regulation of the sector. Most notably, plans to decentralize governance structures within the sector would have gone a long way towards streamlining registration and other regulatory processes for miners. However, the failure for these plans to materialize, and the parallel introduction of the GDO regional officers within a reformed mining agent structure, highlights the agency of local actors and their ability to hybridise reform programmes in ways that preserve their interests. Thus the key challenge that reformers in Liberia are faced with, is how to build in the right incentives for officials across all levels of the sector, ensuring that their interests are linked to the broader formalization agenda. More practical steps would involve the Government making meaningful investments in the sector, and not shifting its responsibilities to mining agents, while improving their employment terms. The roadmap has already identified the decentralization of the licensing process as one of the key activities to be undertaken. However, without substantial investment in physical and training infrastructure, this process is unlikely to be carried out in the short to medium term.

Although the development of the *Regulatory Roadmap for the Artisanal Mining Sector* is, by and large, intended by the Government to serve as a coping strategy in the midst of dwindling iron ore revenues, it nonetheless provides an opportunity for actors to re-engage in the sector. In terms of the interventions of donors, the eight clearly mapped out policy themes provide a framework through which strategic decisions in programming can be made. However, some of the themes explored in this paper – such as the piloting of umbrella organizations or cooperatives – will prove more difficult to achieve than others. The evidence so far illustrates that the development of cooperatives to formalize artisanal mining is problematic, as dealers, brokers, exporters and other Monrovia-based businessman have used them as vehicles to perpetuate pre-existing forms of resource capture and revenue sharing arrangements in the sector. Ultimately, one of the biggest challenges for rolling out a formalized artisanal mining sector in Liberia will continue to be the many vested interests that benefit from maintaining the status quo.

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